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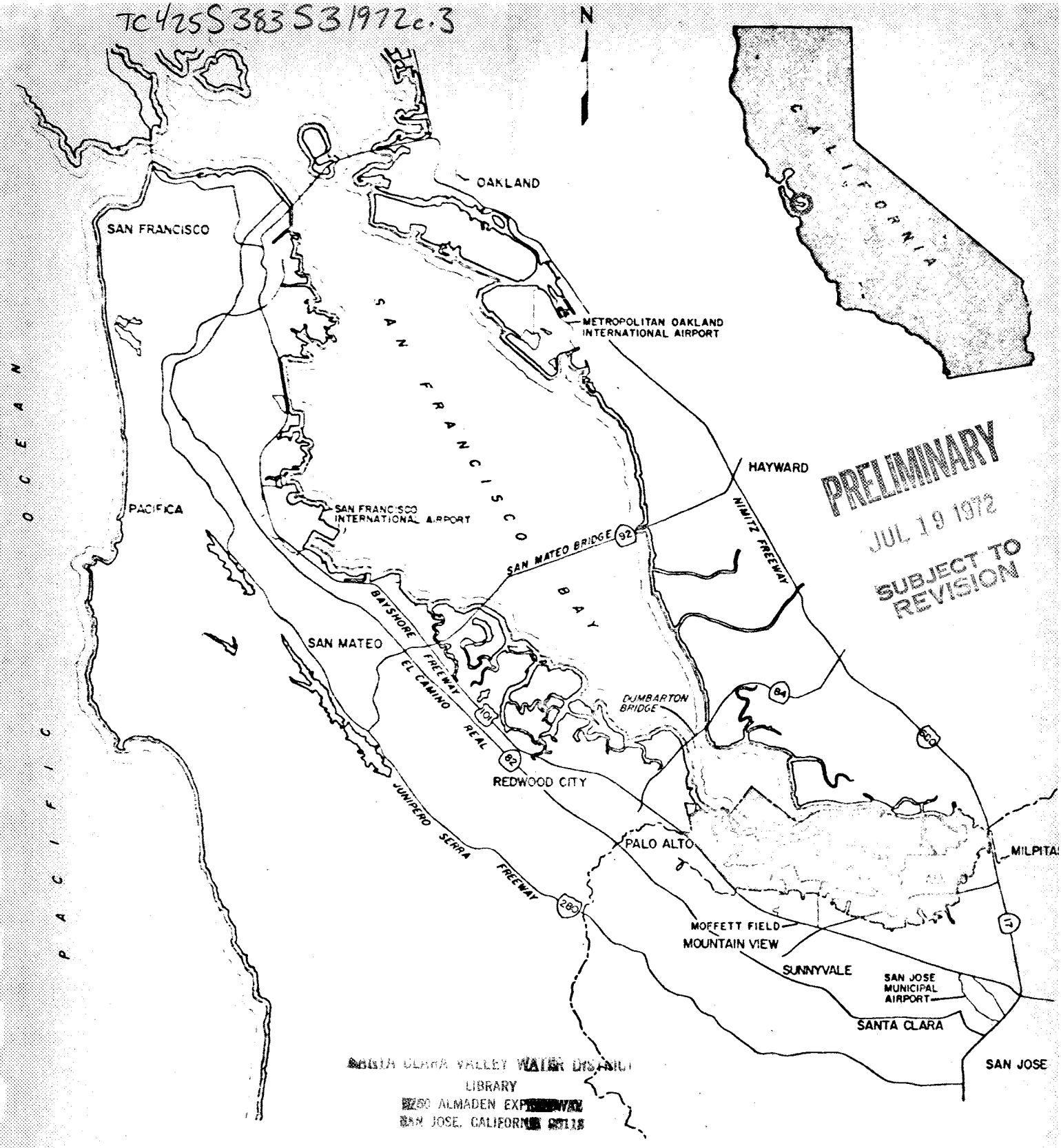


PRELIMINARY
JUL 19 1972
SUBJECT TO REVISION

SANTA CLARA VALLEY WATER DISTRICT
LIBRARY
5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118

TC
425
S383.S3
1972
c.3
LIBRARY

ıra County Flood Control And Water District

lara County Baylands Flood Control Planning Study

ION OF THE SANTA CLARA COUNTY NDS STUDY AREA

GINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS

PLATE

MARCH 197

SAN FRANCISCO BAY

Menlo Park

Ravenswood Point

Sand Point

Long Point

Coyote Point

COYOTE CREEK

SLOUGH

PALO ALTO

Alviso

6.5 Foot Elevation

MOUNTAIN VIEW

LOS ALTOS

SUNNYVALE

N

0 1 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

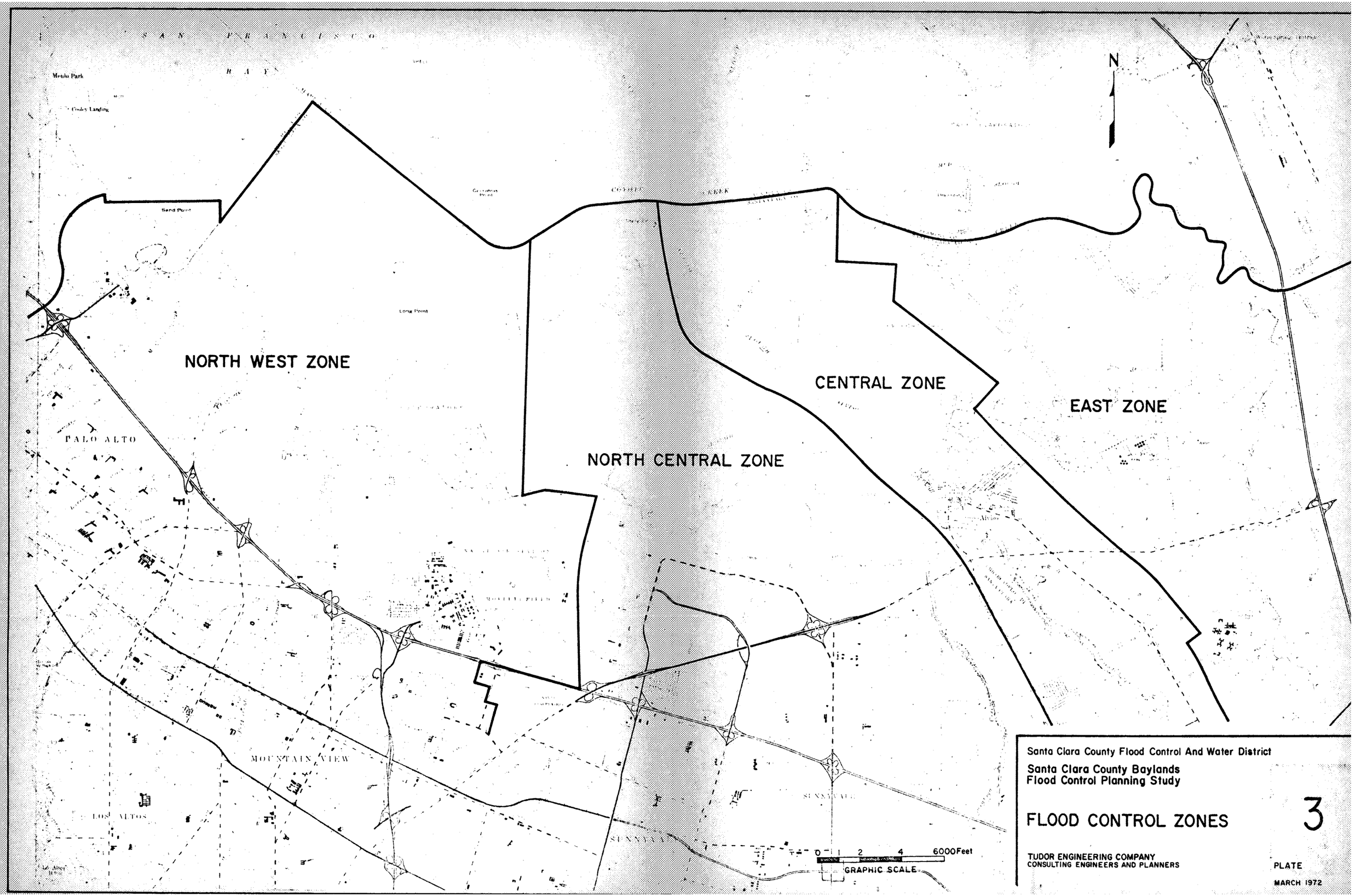
Santa Clara County Baylands
Flood Control Planning Study

GENERAL AREA SUBJECT TO SALT WATER FLOODING

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE 2

MARCH 1972



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

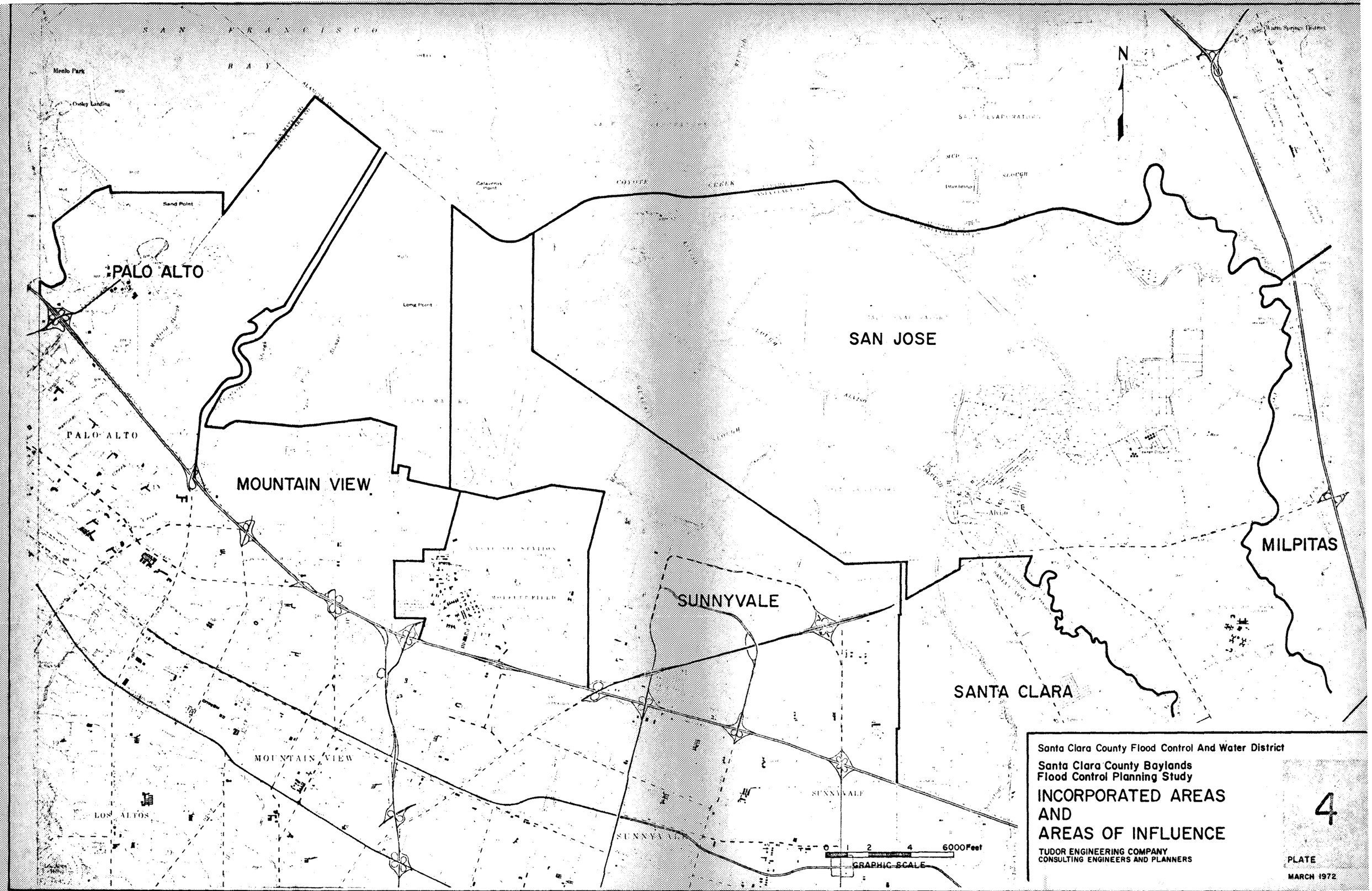
FLOOD CONTROL ZONES

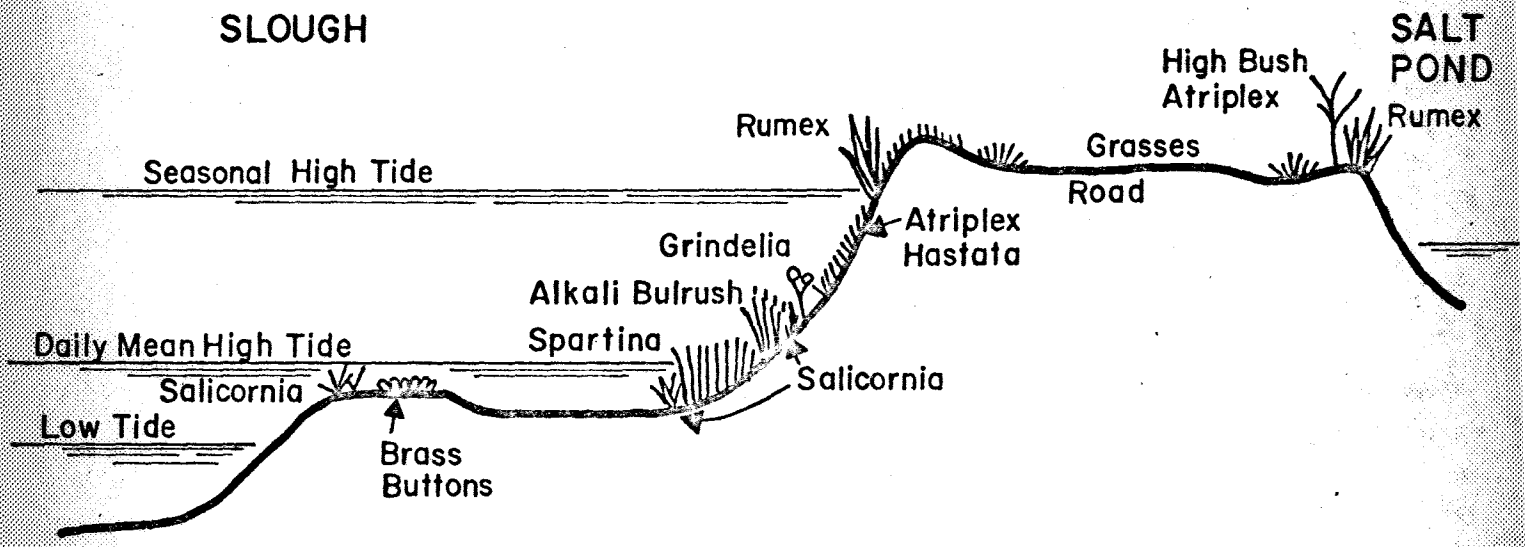
3

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE

MARCH 1972


SAN FRANCISCO BAY
Menlo Park
Dumbarton Point
Dumbarton Bridge
Dumbarton Bridge
Dumbarton Bridge



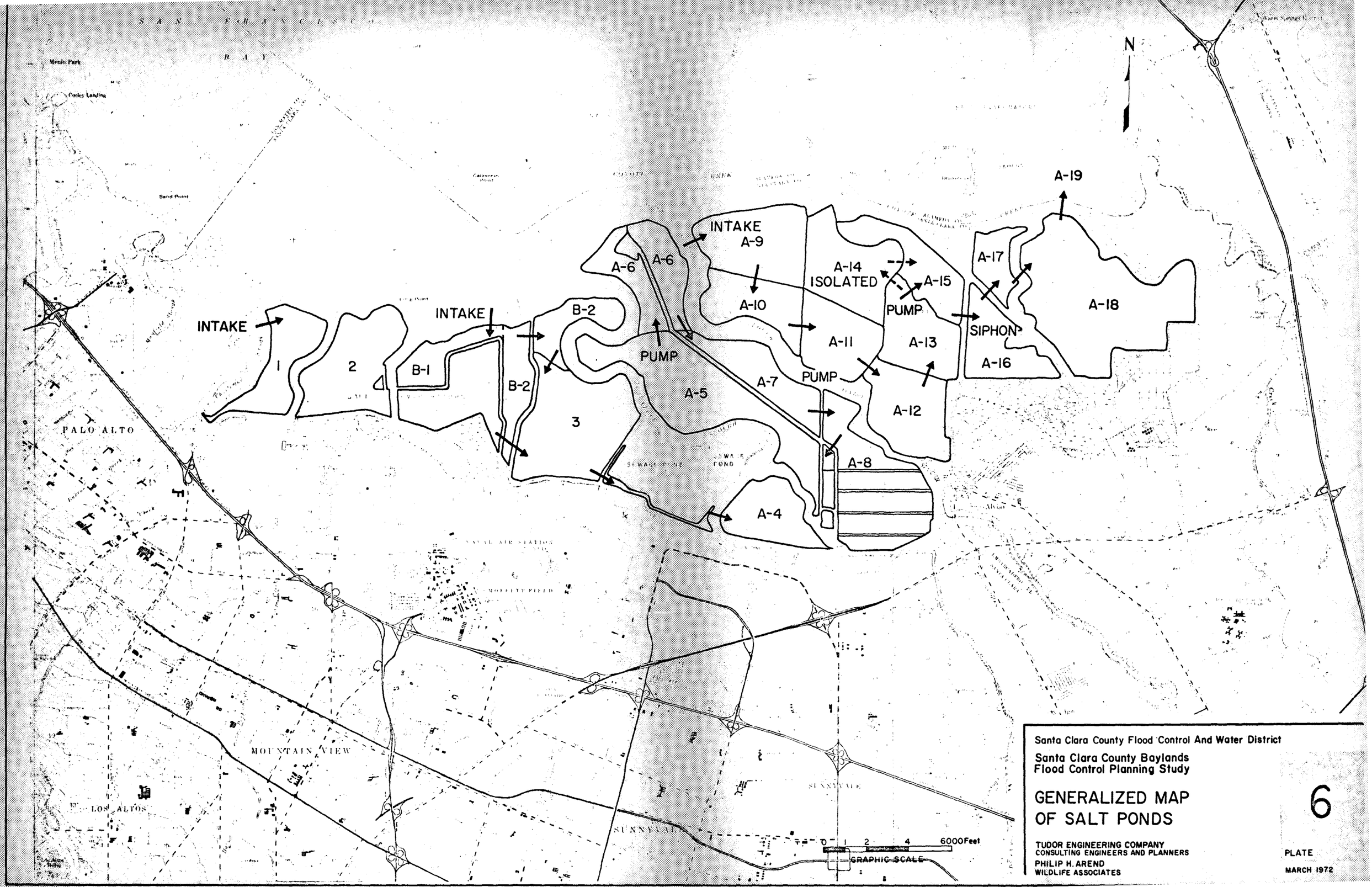
Santa Clara County Flood Control And Water District

Santa Clara County Baylands Flood Control Planning Study

TYPICAL SLOUGH– SALT POND LEVEE CROSS SECTION

TUDOR ENGINEERING COMPANY – CONSULTING ENGINEERS AND PLANNERS
PHILIP H. AREND – WILDLIFE ASSOCIATES

PLATE 5



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

GENERALIZED MAP OF SALT PONDS

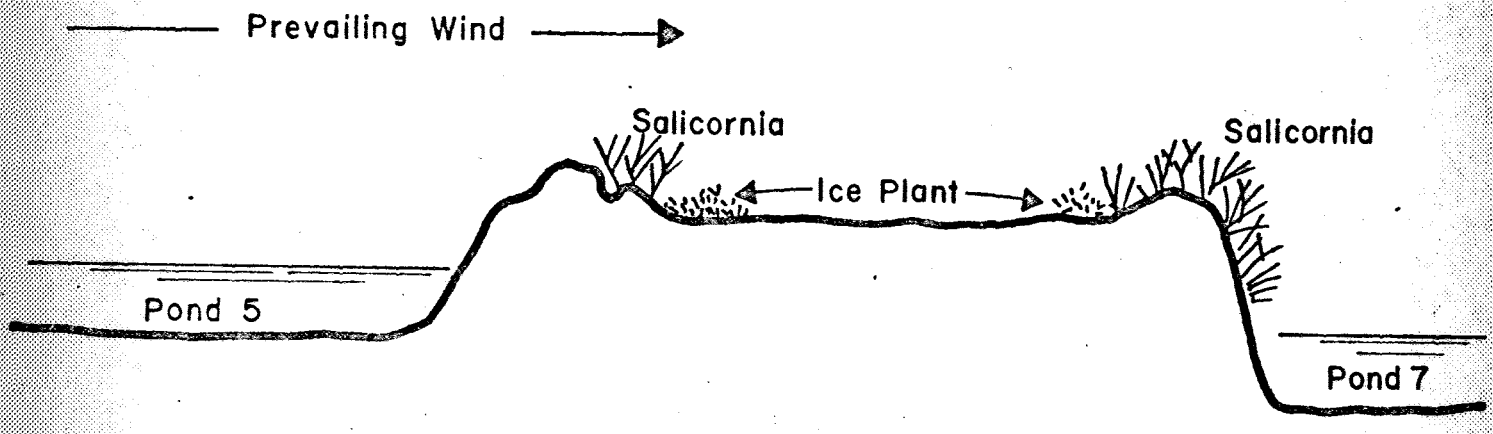
6

PLATE

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PHILIP H. AREND
WILDLIFE ASSOCIATES

MARCH 1972



Santa Clara County Flood Control And Water District

Santa Clara County Baylands Flood Control Planning Study

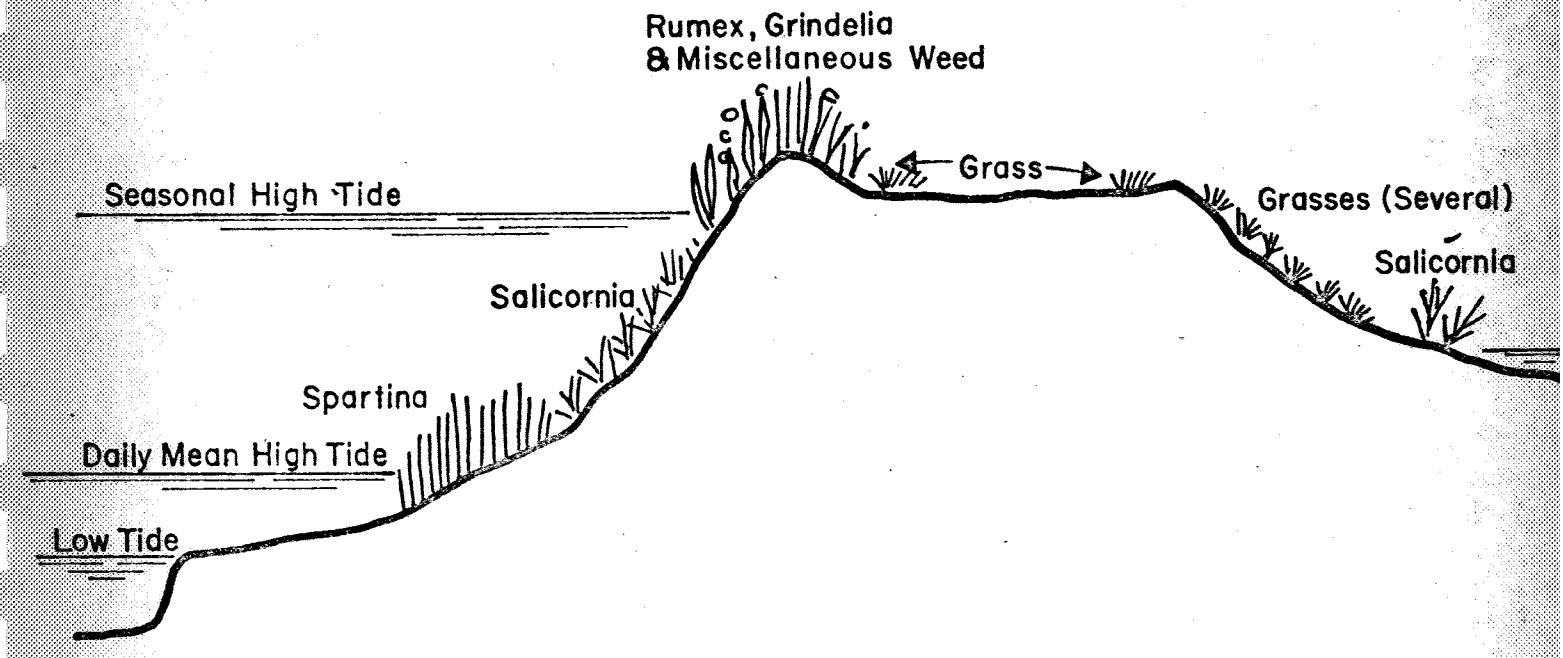
CROSS SECTION OF SALT POND LEVEE SHOWING EFFECT OF SALT SPRAY ON VEGETATION

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS

PHILIP H. AREND - WILDLIFE ASSOCIATES

PLATE 7

MARCH 1972



Santa Clara County Flood Control And Water District

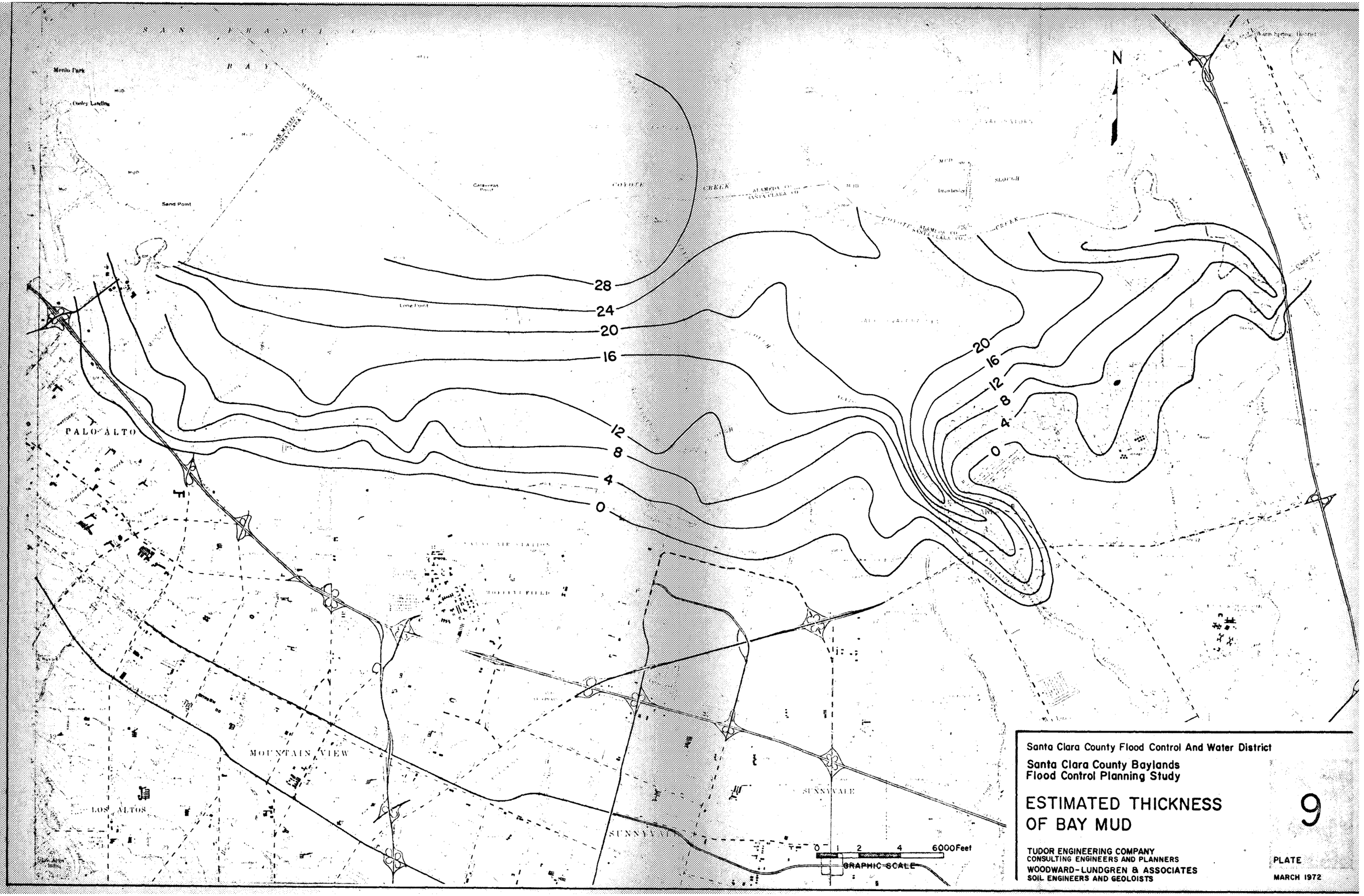
Santa Clara County Baylands Flood Control Planning Study
CROSS SECTION OF STEVENS CREEK– POND 2 LEVEE SHOWING VARIED GROWTH ON STABLE SITE WITH LOW SALINITY

TUDOR ENGINEERING COMPANY–CONSULTING ENGINEERS AND PLANNERS

PHILIP H. AREND–WILDLIFE ASSOCIATES

PLATE

MARCH 197



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

ESTIMATED THICKNESS OF BAY MUD

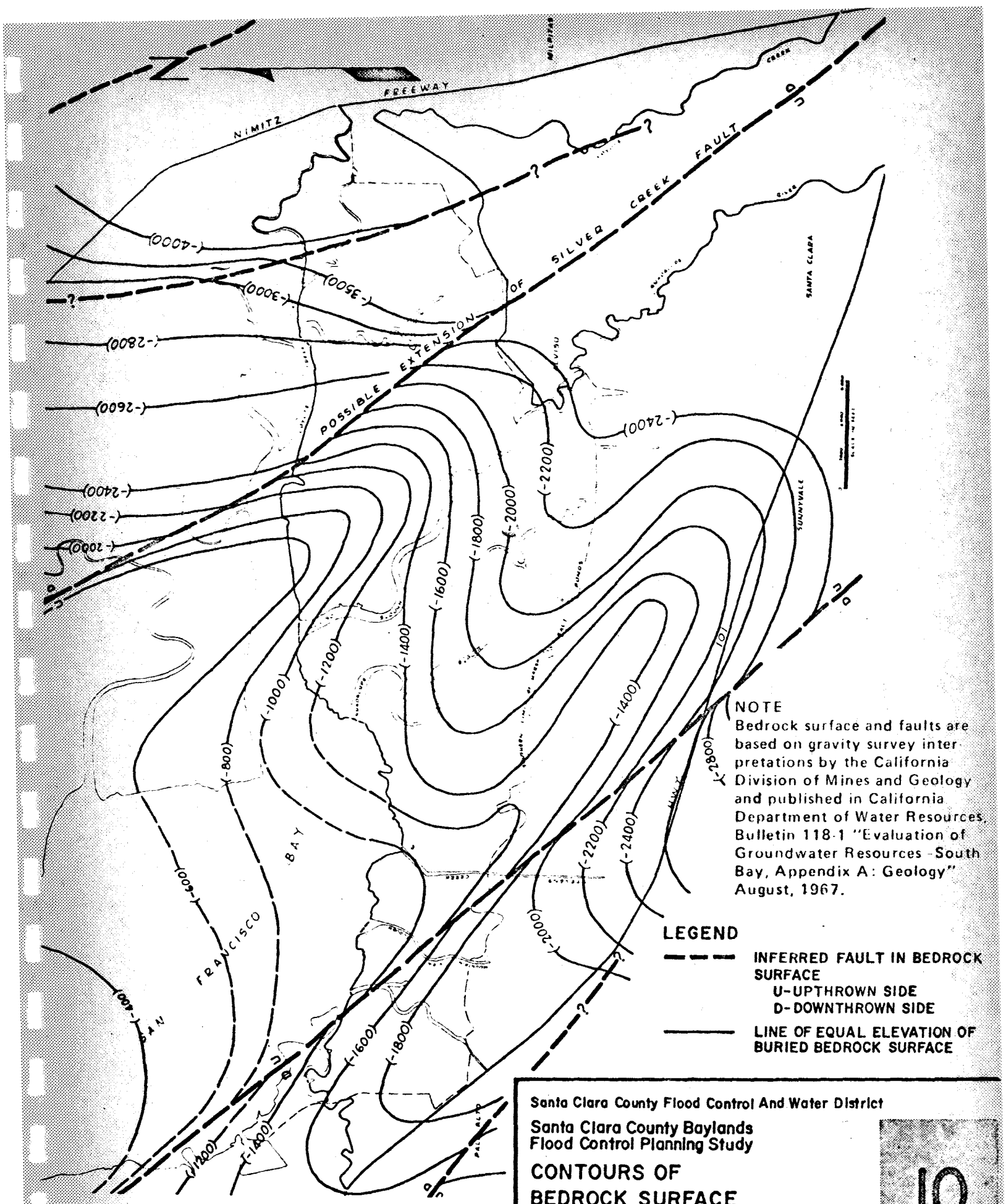
9

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES
SOIL ENGINEERS AND GEOLOISTS

PLATE

MARCH 1972



Santa Clara County Flood Control And Water District

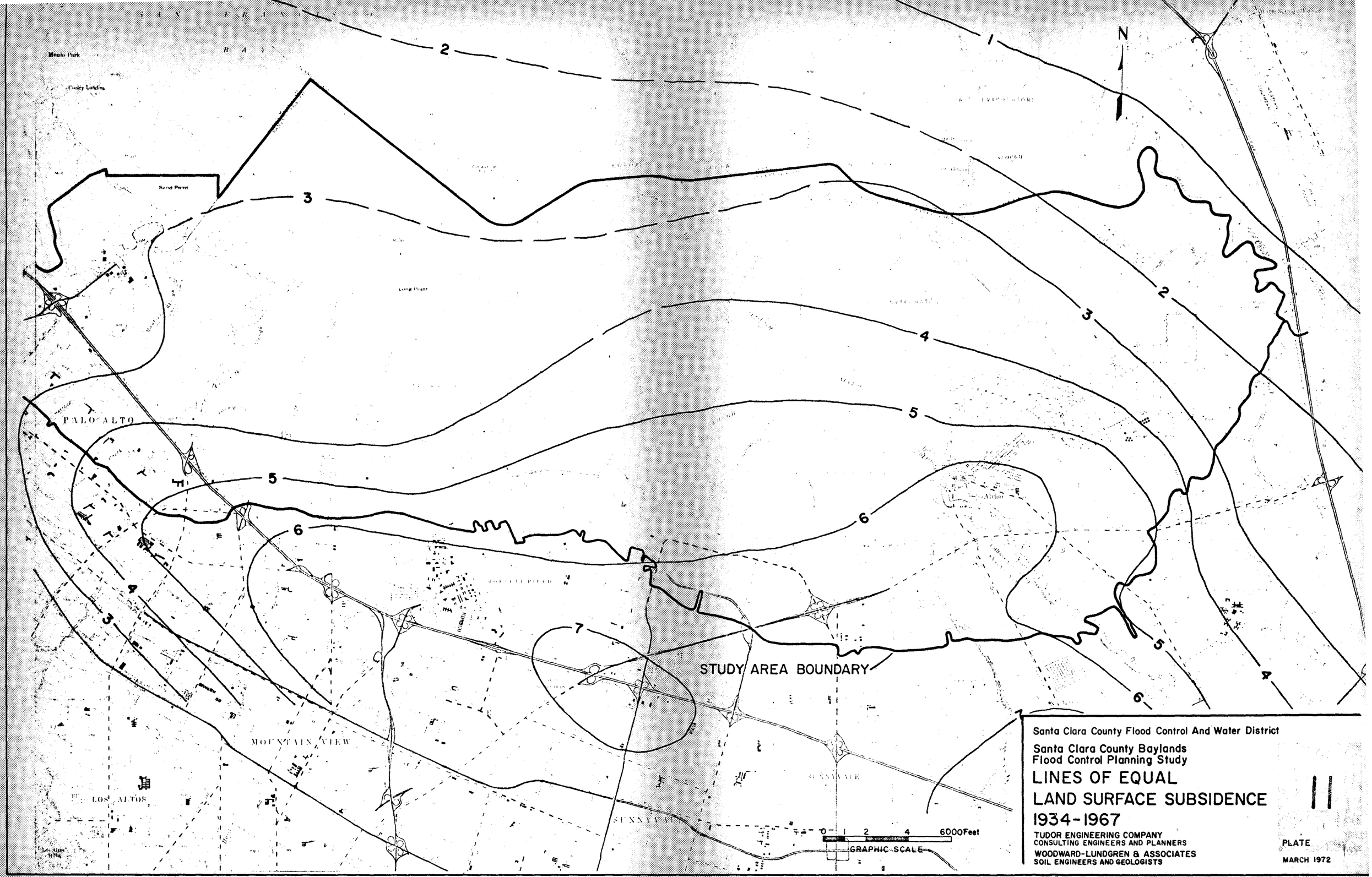
Santa Clara County Baylands
Flood Control Planning Study

CONTOURS OF BEDROCK SURFACE

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES
SOIL ENGINEERS AND GEOLOGISTS

PLATE 10



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

LINES OF EQUAL LAND SURFACE SUBSIDENCE 1934-1967

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES
SOIL ENGINEERS AND GEOLOGISTS

PLATE 11

MARCH 1972

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Santa Clara County Baylands Flood Control Planning Study

TYPICAL SUBSURFACE PROFILES

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS
WOODWARD - LUNDGREN & ASSOCIATES - SOIL ENGINEERS AND GEOLOGISTS

MARCH 1972

PLATE 12

Profile Type	I	II	III	IV	V
Subsurface Profile	Stiff Clay	Stiff Clay	Firm Clay; Sand Or Sand And Gravel; Stiff Clay	Sand; Bay Mud Or Soft Clay; Stiff Clay	Bay Mud; Stiff Clay
		Sand And Gravel	Sand And Gravel	Sand And Gravel	Sand And Gravel
		Stiff Clay	Stiff Clay	Stiff Clay	Stiff Clay
Geologic Condition	Alluvium	Alluvium	Alluvium	Sand And Soft Clay Over Alluvium	Bay Mud Over Alluvium
Risk Zone	A	B*	D*	D**	C

* IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS PROFILE IS ASSESSED TO BE NIL OR VERY LOW, THE RISK ZONE IS CHANGED TO A.

** IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS PROFILE IS ASSESSED TO BE NIL OR VERY LOW, THE RISK ZONE IS CHANGED TO C.

SAN FRANCISCO BAY

COYOTE CREEK

ALAMEDA CO.
SANTA CLARA CO.

GUADALUPE SLOUGH

GUADALUPE

NIMITZ FREEWAY

N

LEGEND

A_{320} – RISK ZONE A
SUBSCRIPT SHOWS DEPTH OF HOLE IN FEET.

B_{DL45} – RISK ZONE B
BASED ON POSSIBILITY OF DEEP LIQUEFACTION
SUBSCRIPT SHOWS DEPTH OF GRANULAR LAYER SUSPECTED OF LIQUEFACTION POTENTIAL.

C_{20} – RISK ZONE C
BASED ON PROBABILITY OF SETTLEMENT
SUBSCRIPT SHOWS DEPTH OF HOLE IN FEET

C_{DL45} – RISK ZONE C
BASED ON PROBABILITY OF SETTLEMENT.
SUBSCRIPT SHOWS DEPTH OF GRANULAR LAYER SUSPECTED OF LIQUEFACTION POTENTIAL.

D_{SL10} – RISK ZONE D
BASED ON POSSIBILITY OF SHALLOW LIQUEFACTION
SUBSCRIPT SHOWS DEPTH OF GRANULAR LAYER SUSPECTED OF LIQUEFACTION POTENTIAL.

* – IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS BORING IS ASSESSED TO BE LOW, RISK ZONE CHANGES TO A

** – IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS BORING IS ASSESSED TO BE LOW, RISK ZONE CHANGES TO C

● – LOCATION OF WATER WELL OR TEST BORING

0 1 2 4 6000 Feet
GRAPHIC SCALE

Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

RISK ZONES ASSIGNED TO INDIVIDUAL WATER WELLS AND BORING LOGS

13

PLATE

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES
SOIL ENGINEERS AND GEOLOGISTS

MARCH 1972

SAN FRANCISCO BAY

N

COYOTE CREEK

ALAMEDA CO.
SANTA CLARA CO.

ALVISO SLOUGH

GUADALUPE SLOUGH

NIMITZ FREEWAY

GUADALUPE

LEGEND

- A – RISK ZONE A
- B_{DL} – RISK ZONE B
  BASED ON POSSIBILITY OF DEEP LIQUEFACTION
- C_{DL} – RISK ZONE C
  BASED ON PROBABILITY OF SETTLEMENT AND POSSIBILITY OF DEEP LIQUEFACTION
- C_S – RISK ZONE C
  BASED ON PROBABILITY OF SETTLEMENT
- D_D – RISK ZONE D
  BASED ON PRESENCE OF UNCONTROLLED DUMP FILL.
- D_{LS} – RISK ZONE D
  BASED ON POSSIBILITY OF LATERAL SPREADING
- D_{SL} – RISK ZONE D
  BASED ON POSSIBILITY OF SHALLOW LIQUEFACTION
- · – IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS ZONE IS ASSESSED TO BE LOW, RISK ZONE CHANGES TO A
- ·· – IF THE LIQUEFACTION POTENTIAL IN THE GRANULAR LAYERS IN THIS ZONE IS ASSESSED TO BE LOW, RISK ZONE CHANGES TO C
- • – LOCATION OF WATER WELL OR ENGINEERING BORING
- + – LOCATION OF ENGINEERING BORING SPECIFYING "LOOSE" SAND

NOTE:

THE DELINEATION OF RISK ZONES IS BASED ON THE LOGS OF THE WATER WELLS AND ENGINEERING BORINGS SHOWN. THE DENSITY OF THESE DATA POINTS IS A MEASURE OF RELATIVE RELIABILITY OF THE RISK ZONE DESIGNATIONS ASSIGNED. RISK ZONE BOUNDARIES AND DESIGNATIONS MAY CHANGE AS MORE SUBSURFACE INFORMATION BECOMES AVAILABLE.

0 1 2 4 6000 Feet
GRAPHIC SCALE

Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

GEOLOGIC RISK ZONES BASED ON SOIL CONDITIONS

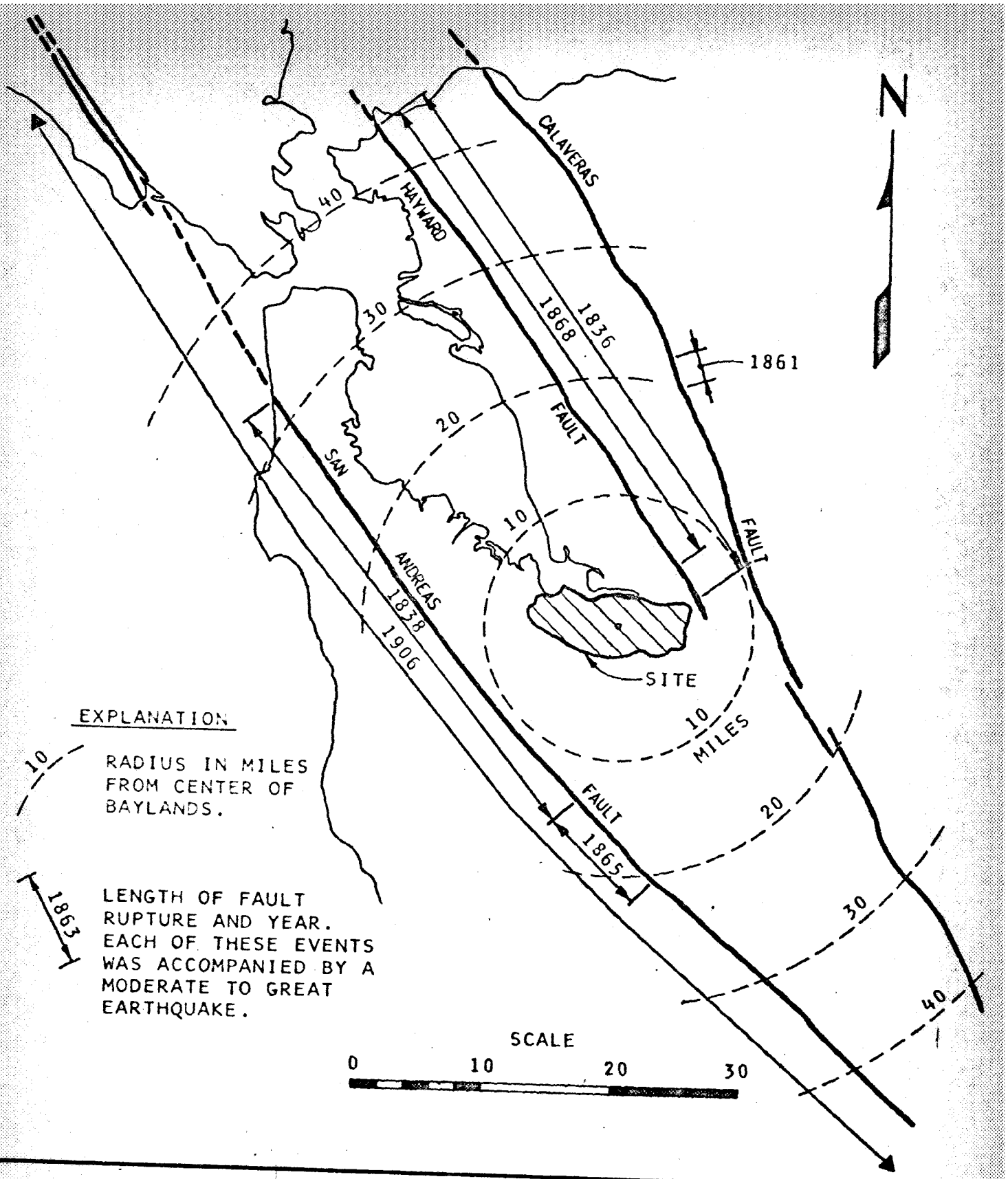
14

PLATE

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES
SOIL ENGINEERS AND GEOLOGISTS

MARCH 1972



Santa Clara County Flood Control And Water District

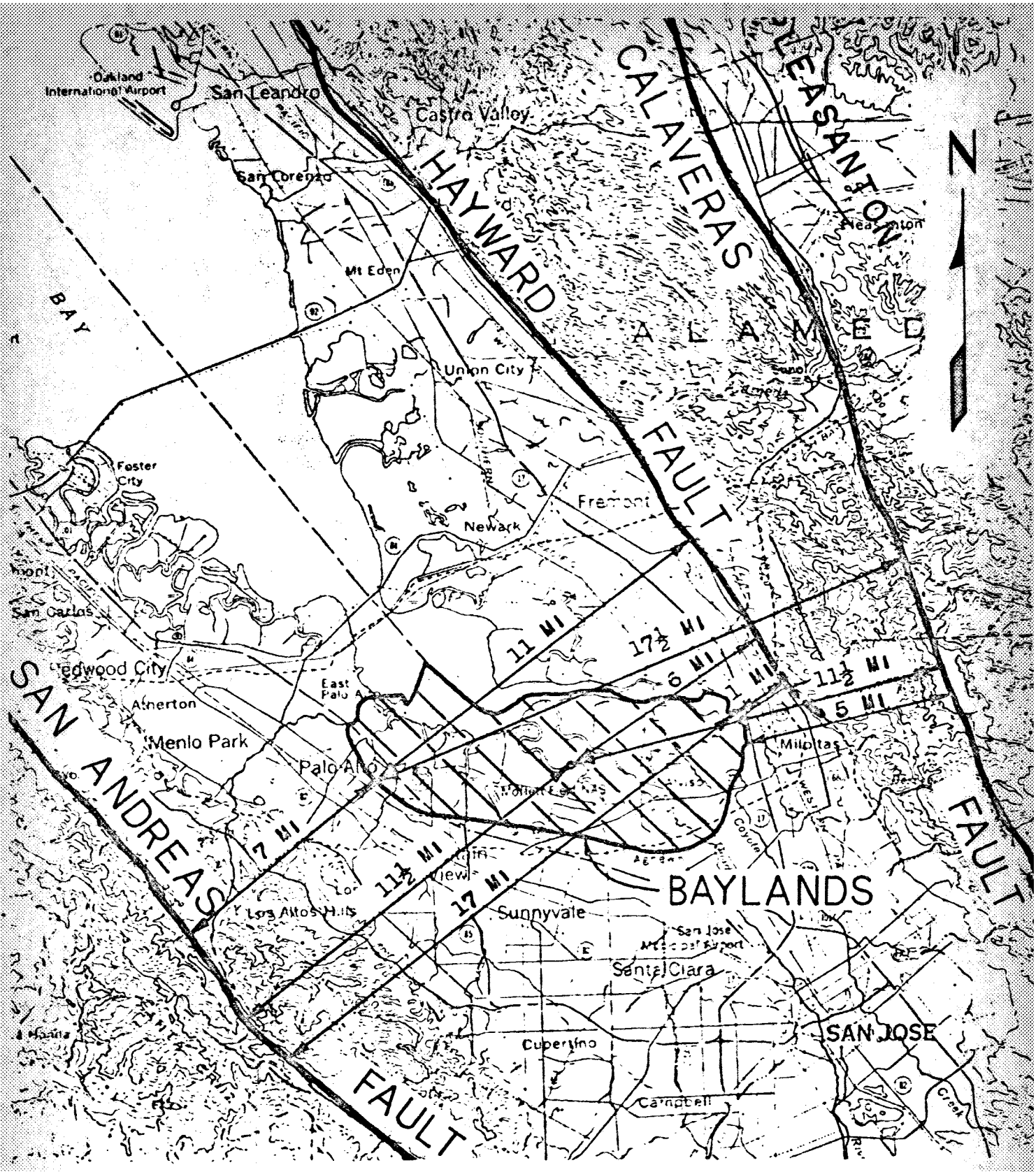
Santa Clara County Baylands Flood Control Planning Study

HISTORIC FAULT DISPLACEMENT NEAR THE BAYLANDS

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS

WOODWARD-LUNDGREN & ASSOCIATES - SOIL ENGINEERS AND GEOLOGISTS

PLATE 15



Santa Clara County Flood Control And Water District

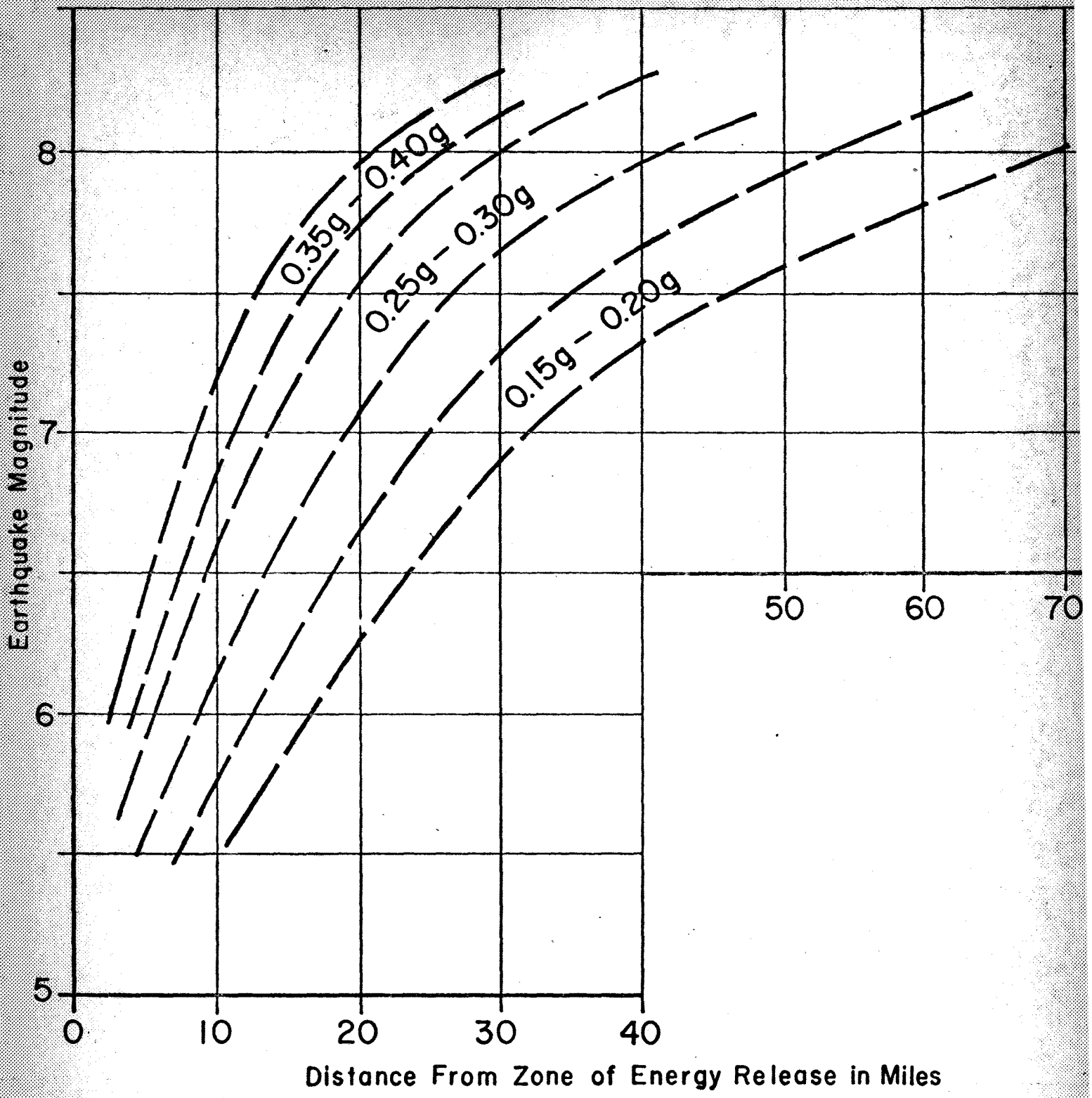
Santa Clara County Baylands Flood Control Planning Study

POSITION OF BAYLANDS RELATIVE TO ACTIVE FAULTS

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS
WOODWARD-LUNDGREN & ASSOCIATES - SOIL ENGINEERS AND GEOLOGIST

16
PLATE

MARCH 197



Santa Clara County Flood Control And Water District

Santa Clara County Baylands Flood Control Planning Study

ESTIMATED GROUND SURFACE ACCELERATION DUE TO EARTHQUAKES

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS
WOODWARD-LUNDGREN & ASSOCIATES - SOIL ENGINEERS AND GEOLOGISTS

PLATE 17

MARCH 1972

SAN FRANCISCO BAY

Menlo Park

Oneto Landing

Sand Point

Palo Alto

Mountain View

Los Altos

Sunnyvale

Warm Springs District

COYOTE CREEK

ALAMEDA CO. — SANTA CLARA CO.

6.5 Foot Elevation

N

LEGEND

- FLOOD CONTROL DISTRICT
- LESLIE SALT CO.
- OTHER PUBLIC OR PRIVATE
- LAND FILL (Recent Fills Which Deter Flooding)

0 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

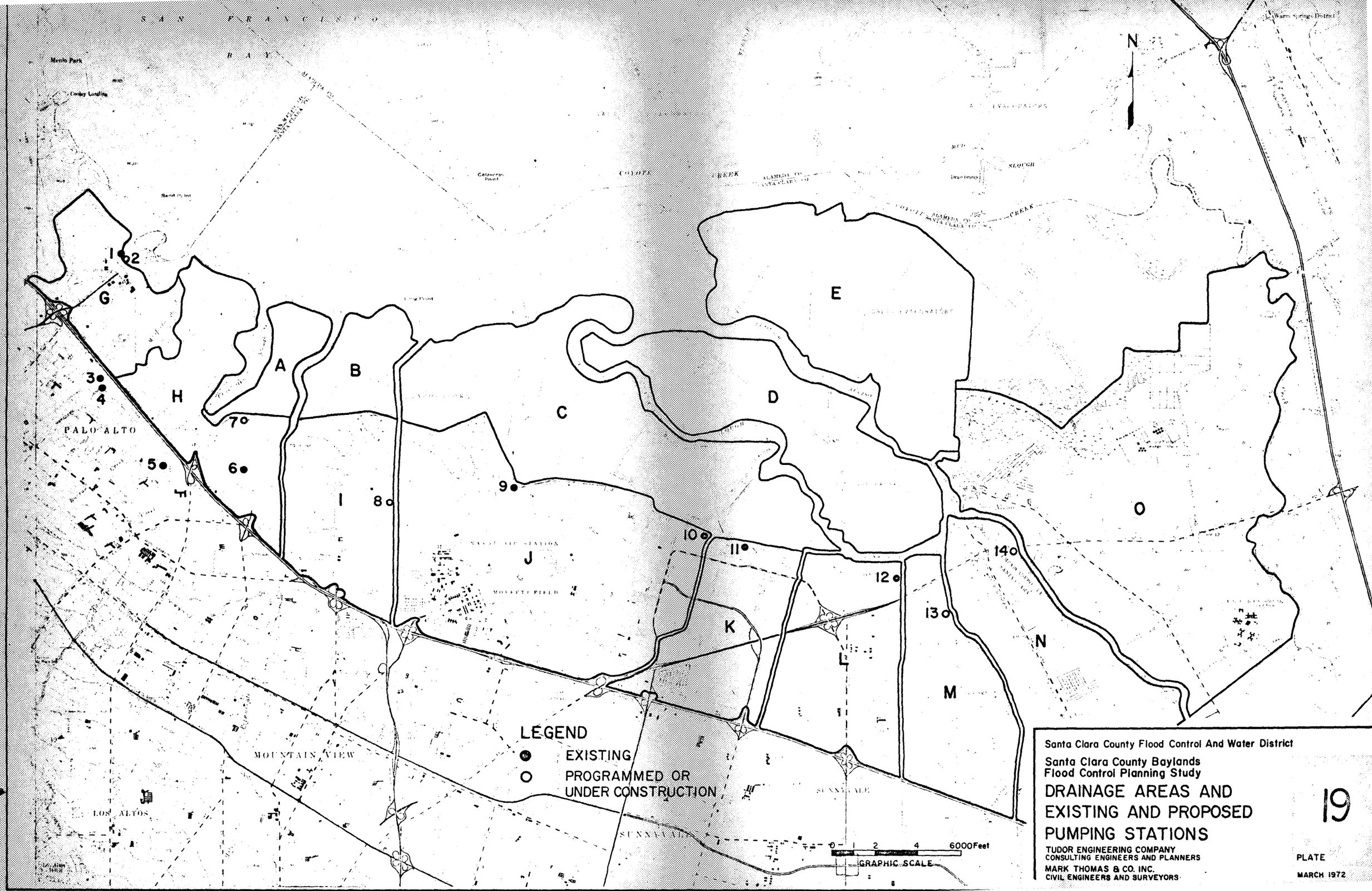
Santa Clara County Baylands
Flood Control Planning Study

EXISTING LEVEES AND RESPONSIBLE AGENCIES

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE 18

MARCH 1972



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

DRAINAGE AREAS AND EXISTING AND PROPOSED PUMPING STATIONS

19

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

MARK THOMAS & CO. INC.
CIVIL ENGINEERS AND SURVEYORS

PLATE

MARCH 1972

SAN FRANCISCO BAY

Menlo Park

Cooley Landing

Sand Point

LEVEE-A

LEVEE-B

LEVEE-C

LEVEE-D

LEVEE-E

LEVEE-F

LEVEE-G

LEVEE-H

LEVEE-I

LEVEE-J

LEVEE-K

PALO ALTO

MOUNTAIN VIEW

LOS ALTOS

SUNNYVALE

N

LEGEND

- DESIGN ELEVATION / CONSTRUCTION ELEVATION
- PROPOSED CONSTRUCTION
- EXISTING FILL-ADEQUATE IN ELEVATION
- 24" RIPRAP

0 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

INBOARD LEVEE PLAN

PLATE 20

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

MARCH 1972

N

LEVEE-L

LEVEE-M

LEVEE-N

LEVEE-O

LEVEE-P

LEVEE-R

LEVEE-S

LEVEE-T

LEVEE-U

LEVEE-V

LEVEE-W

LEVEE-X

PALO ALTO

MOUNTAIN VIEW

LOS ALTOS

LEGEND

DESIGN ELEVATION
CONSTRUCTION ELEVATION

PROPOSED CONSTRUCTION

EXISTING FILL-ADEQUATE IN ELEVATION

24" RIPRAP

0 1 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

INBOARD LEVEE PLAN WITH CHANNEL LEVEES

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

21

PLATE

MARCH 1972

SAN FRANCISCO BAY

Menlo Park

Greco Landing

Seal Point

Coyote Point

ALAMEDA CO. SAN MATEO CO. SANTA CLARA CO.

COYOTE CREEK

Guadalupe Slough

COYOTE SANTA CLARA CO. CREEK

Warm Springs (Unoff.)

N

LEVEE-AA

LEVEE-BB

LEVEE-CC

LEVEE-DD

LEVEE-EE

LEVEE-FF

LEVEE-GG

LEVEE-HH

LEVEE-II

LEVEE-JJ

LEVEE-KK

LEVEE-LL

LEVEE-MM

PALO ALTO

NAVAL AIR STATION MOFFETT FIELD

MOUNTAIN VIEW

LOS ALTOS

SUNNYVALE

LEGEND

- DESIGN ELEVATION / CONSTRUCTION ELEVATION
- PROPOSED CONSTRUCTION
- EXISTING FILL-ADEQUATE IN ELEVATION
- 24" RIPRAP

0 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

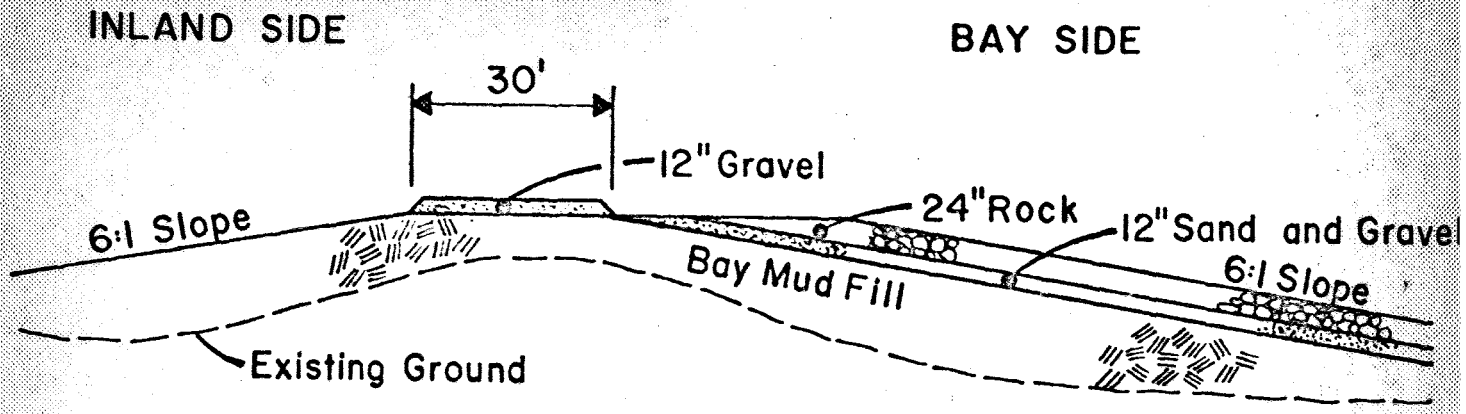
Santa Clara County Baylands
Flood Control Planning Study

OUTBOARD LEVEE PLAN

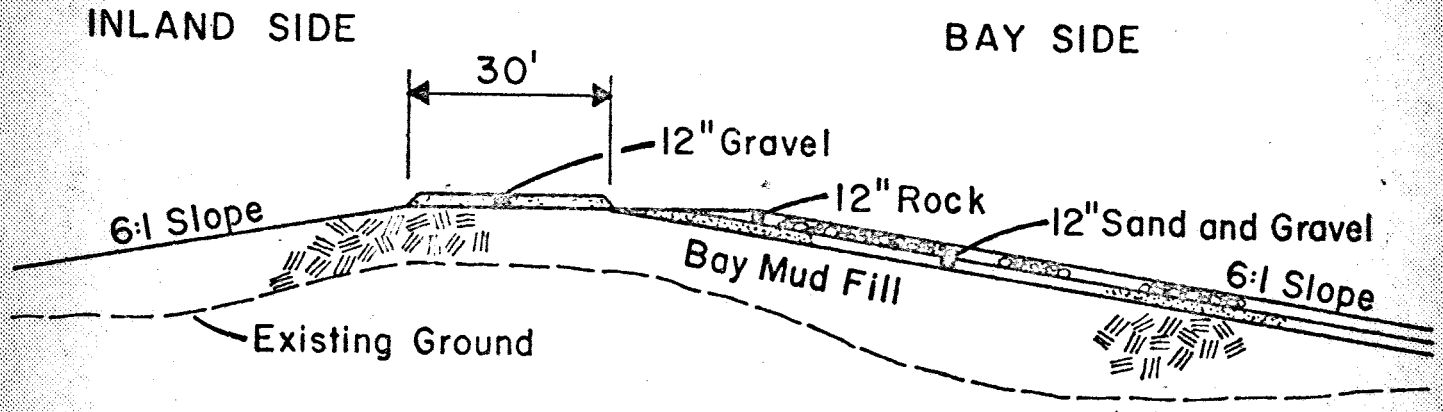
TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE 22

MARCH 1972



TYPICAL SECTION
OUTBOARD LEVEE



TYPICAL SECTION
INBOARD LEVEE

Santa Clara County Flood Control And Water District

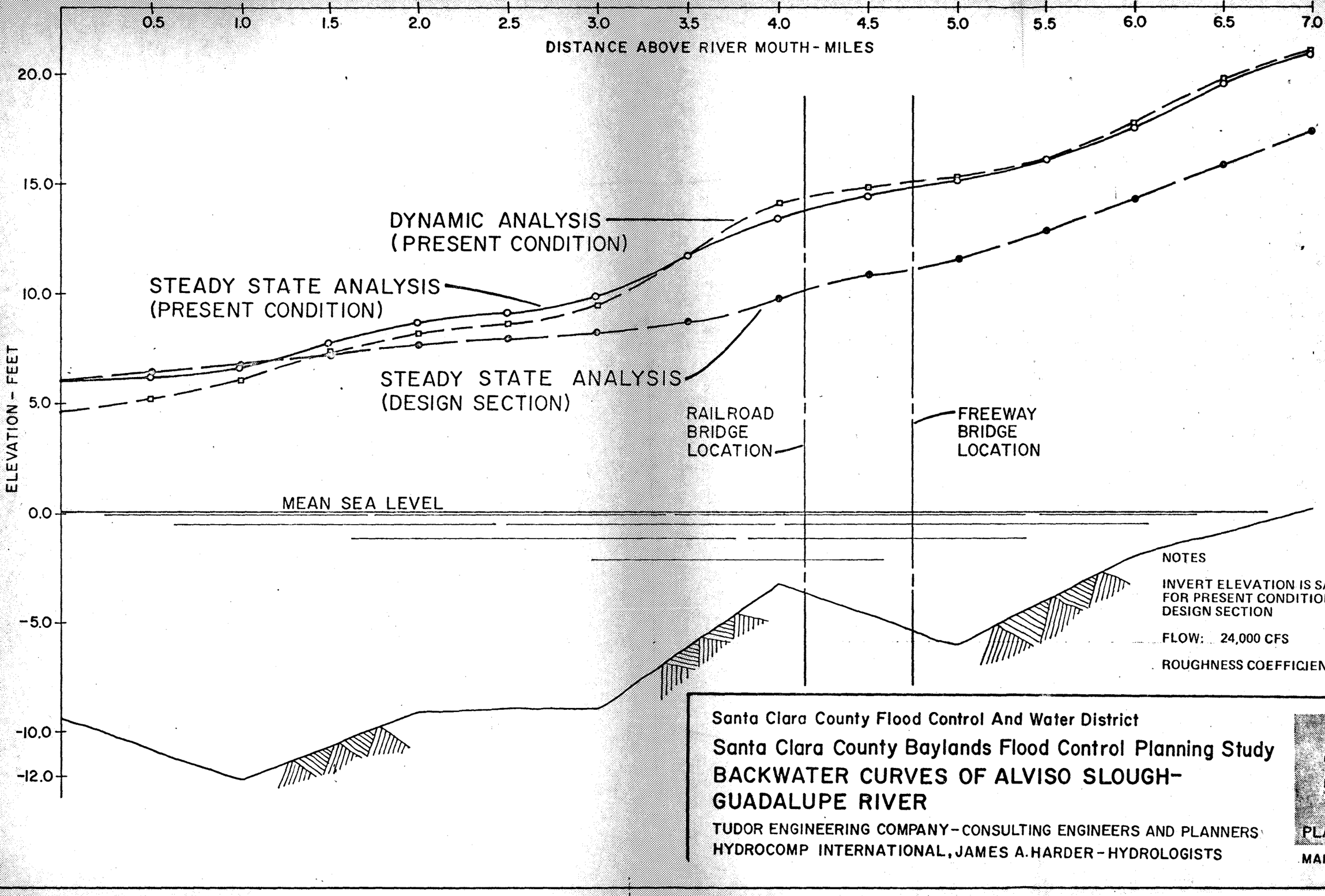
Santa Clara County Baylands Flood Control Planning Study

TYPICAL SECTION
OUTBOARD LEVEE AND INBOARD LEVEE

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS

PLATE 23

MARCH 197



Santa Clara County Flood Control And Water District

Santa Clara County Baylands Flood Control Planning Study

BACKWATER CURVES OF ALVISO SLOUGH-GUADALUPE RIVER

TUDOR ENGINEERING COMPANY - CONSULTING ENGINEERS AND PLANNERS
HYDROCOMP INTERNATIONAL, JAMES A. HARDER - HYDROLOGISTS

24

PLATE

MARCH 197

SAN FRANCISCO BAY

Menlo Park

Golden Gate

Sand Point

5046.01

5046.02

PALO ALTO

5407

5050

5048.01

5048.02

5049.01

MOUNTAIN VIEW

LOS ALTOS

SUNNYVALE

N

0 1 2 4 6000 Feet

GRAPHIC SCALE

Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

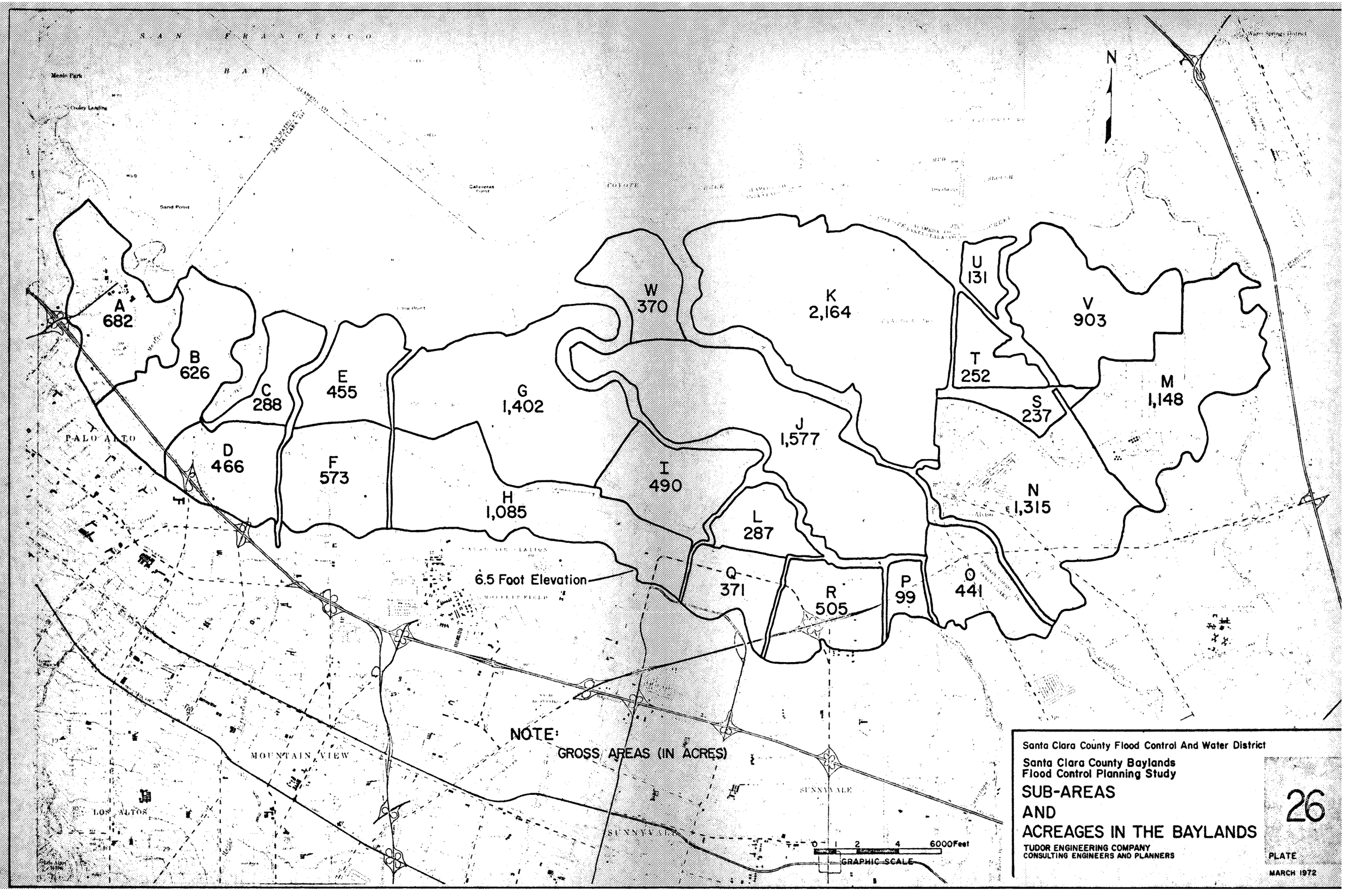
CENSUS TRACTS IN THE BAYLANDS

25

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE

MARCH 1972



Santa Clara County Flood Control And Water District

Santa Clara County Baylands
Flood Control Planning Study

SUB-AREAS AND ACREAGES IN THE BAYLANDS

TUDOR ENGINEERING COMPANY
CONSULTING ENGINEERS AND PLANNERS

PLATE 26

MARCH 1972